Avian Influenza H5N1 Case Criteria and Testing Guidelines

Michigan Department of Community Health

http://www.michigan.gov/flu
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1. CLINICAL CRITERIA NECESSARY FOR REQUESTING TESTING [1]

An illness with all of the following:

- Temperature of ≥38°C (≥100.4° F) in the past 24 hours OR a history of feverishness in the past 24 hours, **AND**
- Has radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
- Requires hospitalization or is fatal; or non-hospitalized with epidemiological link

AND

2. EPIDEMIOLOGICAL CRITERIA NECESSARY FOR TESTING

The clinician should ask the patient about the following **within 7 days** of symptom onset:

- History of travel to a country[2] with avian influenza H5N1 documented in poultry, wild birds, and / or humans, **AND** had at least one of the following potential exposures during travel:
  - Direct contact with (e.g., handling, slaughtering, defeathering, butchering, preparing for consumption) well-appearing, sick or dead domestic poultry or wild birds
  - Direct contact with surfaces contaminated with poultry feces or poultry parts (carcasses, internal organs)
  - Consumption of raw or incompletely cooked poultry or poultry products
  - Close contact (approach within 6 ft) with a confirmed H5N1-infected animal besides poultry or wild birds (e.g. cat or dog)
  - Close contact (approach within 6 ft) of a person hospitalized or dead due to a severe unexplained respiratory illness
  - Visiting a market where live poultry are sold or slaughtered
  - Handling samples (animal or human) suspected of containing H5N1 virus in a laboratory or other setting
- Close contact (approach within 6 ft) of an ill person who was confirmed or suspected to have H5N1.
- Worked with live influenza H5N1 virus in a laboratory.

If the patient has any of the above exposures, then the epidemiological criteria necessary for testing are met.

If YES to the criteria in both Boxes 1 and 2 above

1. Initiate Airborne, Standard and Full Barrier infection control precautions.[3]
2. Treat as clinically indicated.[4]
3. Contact your local health department and the MDCH Bureau of Epidemiology (BOE) to request approval for Avian Influenza A(H5N1) testing and specimen collection protocols.
   - BOE can be contacted M-F 8am - 5pm at (517) 335-8165 or after hours and weekends at (517) 335-9030.
   - If approved, collect and send specimens for novel influenza virus testing to MDCH Laboratory.
     - Oropharyngeal swab and lower respiratory tract specimens (bronchoalveolar lavage, tracheal aspirates) are preferred.[5]
     - Serologic testing for influenza H5N1-specific antibody is not available at the MDCH Laboratory.[6]
4. Help identify contacts, including healthcare workers.

1. Testing can be considered if the patient has a mild or atypical disease, such as respiratory illness and fever that does not require hospitalization or significant neurologic or gastrointestinal symptoms in the absence of respiratory disease, or if the patient has a severe or fatal respiratory disease whose epidemiological information is uncertain, unavailable or otherwise suspicious but does not meet the criteria in Box 2. Please contact your local health department and the MDCH Bureau of Epidemiology at the numbers listed above for further consultation.

2. For a listing of influenza H5N1-affected countries, visit the CDC website at http://www.cdc.gov/flu/avian/outbreaks/current.htm; the OIE website at http://www.oie.int/eng/en_index.htm; and the WHO website at http://www.who.int/csr/disease/avian_influenza/en/.

3. CDC is currently revising its interim guidance for infection control, which differs between seasonal, novel (avian) and pandemic influenza. Until updates are available, refer to http://www.cdc.gov/flu/professionals/infectioncontrol/ for seasonal influenza infection control, and for novel influenza infection control http://www.cdc.gov/flu/avian/professional/infect-control.htm. For pandemic influenza, reference the Health and Human Services Pandemic Influenza Plan p. 256-8(Suppl. 5, p. 20-2) at http://www.hhs.gov/pandemicflu/plan/pdf/HHSPandemicInfluenzaPlan.pdf.

4. For the most current recommendations, visit the CDC's antivirals website at http://www.cdc.gov/flu/professionals/treatment/.

5. Oropharyngeal swab specimens and lower respiratory tract specimens (e.g., bronchoalveolar lavage or tracheal aspirates) are preferred because they appear to contain the highest quantity of virus for influenza H5N1 detection. Nasal or nasopharyngeal swab specimens are acceptable, but may contain less virus and therefore not be optimal specimens for virus detection. Bronchoalveolar lavage is considered to be a high-risk aerosol-generating procedure. Therefore, infection control precautions should include the use of gloves, gown, goggles or face shield, and a fit-tested respirator with an N-95 or higher rated filter. A loose-fitting powered air-purifying respirator (PAPR) may be used if fit-testing is not possible. Detection of influenza H5N1 is more likely from specimens collected within the first 3 days of illness onset. If possible, serial specimens should be obtained over several days from the same patient. Swabs used for specimen collection should have a Dacron tip and an aluminum or plastic shaft. Swabs with calcium alginate or cotton tips and wooden shafts are not recommended. Specimens should be placed at 4°C immediately after collection. Commercial rapid influenza diagnostic tests are not recommended for the purpose of detecting H5N1 infection.

6. Serologic testing for influenza H5N1-specific antibody, using appropriately timed specimens, can be considered if other influenza H5N1 diagnostic testing methods are unsuccessful. Paired serum specimens from the same patient are required: one sample should be tested within the first week of illness, and a second sample should be tested 2-4 weeks later.